

WHAT IS CLAIMED IS:

1. A multi-band cable antenna comprising:

a dielectric substrate, as a nonconductive dielectric  
5 having a predetermined dielectric constant, with a  
plurality of conductive microstrips formed on the top and  
bottom sides of the substrate, for inducing a resonance in  
the multi-band; and

signal transfer means including the first and second  
10 conductors for signal transfer, which are electrically  
separated from each other by a layer of insulator, the  
first conductor for signal transfer configured to be short-  
circuited with one of microstrips formed on the top side of  
the dielectric substrate.

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2. The multi-band cable antenna according to claim 1,  
further comprising a conductive solder ball for physically  
coupling one of the conductors for signal transfer with the  
microstrips formed on the top side of the dielectric  
20 substrate.

3. The multi-band cable antenna according to claim 1  
or 2, wherein the dielectric substrate further includes an  
upper and lower short-circuited conductor for short-  
25 circuiting the second conductor for signal transfer on the

signal transfer means with one of the micristrips formed on the bottom side of the dielectric substrate, and wherein the upper and lower short-circuit conductor and the microstrips formed on the bottom side circuit-shortcd with  
5 the second conductor of signal transfer are electrically grounded.

4. The multi-band cable antenna according to claim 3, wherein the upper and lower short-circuit conductor  
10 comprises a via hole passing through the dielectric substrate in a width direction, with a conductor coated on an inner wall of the via hole.

5. The multi-band cable antenna according to claim 3,  
15 wherein the upper and lower short-circuited conductor comprises a microstrip attached to a side portion of an edge of the dielectric substrate by a length of a width of the dielectric substrate in a width direction of the dielectric substrate.

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